

Amendments to the Claims:

Please cancel Claims 1-14 and 16-22 without prejudice or disclaimer of the subject matter presented therein. Please add new Claims 23 and 24 as follows. This listing of claims will replace all prior versions and listings of claims in the Application:

1. – 22. (Cancelled)

23. (New) A method for processing input image data, the method comprising the steps of:

receiving image data that includes data representing a plurality of pixels, wherein each pixel of the plurality of pixels is associated with a location and one of at least three intensities;

accessing data in a memory, the data representing a halftone screen, the halftone screen including a plurality of halftone planes, each halftone plane of the plurality of halftone planes including a plurality of cells, wherein each cell of the plurality of cells is associated with one of at least three microdot densities, the microdot densities being representative of a particular dot size capable of being printed by a gray-level printer;

for each pixel (“current pixel”) of the plurality of pixels:
determining the intensity and the location of the current pixel, selecting one of the plurality of halftone planes based at least upon the current pixel’s intensity, and associating one of the plurality of microdot densities in the selected halftone plane with the current pixel based at least upon the current pixel’s location;

outputting the microdot densities associated with the plurality of pixels as first gray-level halftone data;

blending the first gray-level halftone data with second gray-level halftone data resulting in blended-gray-level halftone data, wherein the blending weights the first gray-level halftone data and the second gray-level halftone data depending upon characteristics of the image data;

performing edge enhancement on portions of the blended-gray-level halftone data that include text or high-contrast-edge data, thereby resulting in enhanced-blended-gray-level halftone data; and

outputting the enhanced-blended-gray-level halftone data.

24. (New) An image processing apparatus comprising:

a memory storing data representing a halftone screen, the halftone screen including a plurality of halftone planes, each halftone plane of the plurality of halftone planes including a plurality of cells, wherein each cell of the plurality of cells is associated with one of at least three microdot densities, the microdot densities being representative of a particular dot size capable of being printed by a gray level printer;

a first halftone circuit configured at least to:

receive image data that includes data representing a plurality of pixels, wherein each pixel of the plurality of pixels is associated with a location and one of at least three intensities, and

for each pixel ("current pixel") of the plurality of pixels:
determine the intensity and the location of the current pixel, select one of the plurality of halftone planes based at least upon the current pixel's intensity, associate one of the plurality of microdot densities in the selected halftone plane with the current pixel based at least upon the current pixel's location, and output the microdot densities associated with the plurality of pixels as first gray-level halftone data;

a second halftone circuit configured at least to receive the image data and output second gray-level halftone data;

a blending circuit communicatively connected to the first halftone circuit and the second halftone circuit and configured at least to blend the first gray-level halftone data with the second gray-level halftone data, thereby resulting in blended-gray-level halftone data, wherein the blending performed by the blending circuit weights the first gray-level halftone data and the second gray-level halftone data depending upon characteristics of the image data;

an edge enhancement circuit communicatively connected to the blending circuit and configured at least to perform edge enhancement on portions of the blended-gray-level halftone data that include text or high-contrast-edge data, thereby resulting in enhanced-blended-gray-level halftone data; and

an output circuit communicatively connected to the edge enhancement circuit and configured at least to output the enhanced-blended-gray-level halftone data.

Amendments to the Drawings:

Enclosed are 2 replacement sheets of formal drawings for FIGS. 9 and 24. Please substitute these formal drawings for the drawings that are currently on file in the subject application. These drawings contain no new subject matter.